

Airport Layout Plan (ALP) Review & Approval

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Southern Region
Airports Division
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Objectives

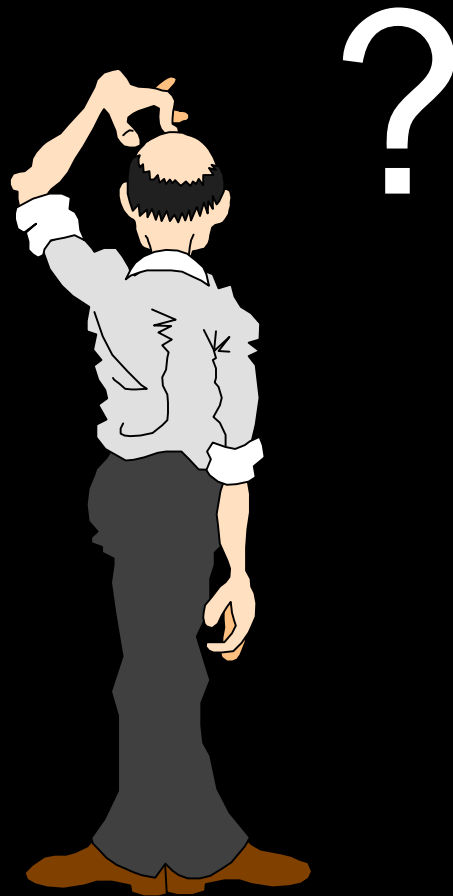
- What an ALP is.
- Why we review & approve ALPs.
- What our role is in ALP rev/appv.
- What we review on the ALP.
- How we can improve ALP coord.
- What our appvl of the ALP means.

What is an ALP?

Definition (AC150/5300-13, par. 5):

“An Airport Layout Plan (ALP) is a scaled drawing of existing and proposed land and facilities necessary for the operation and development of the airport....”

Who's ALP is it anyway?



The ALP IS:



A key
communication
and agreement
document
between the
airport owner
and FAA.

FAA relies on the ALP for:

- **Aeronautical studies.**
- **Siting of FAA facilities and equip.**
- **Analysis of operational changes.**
- **Development of new SIAPs.**
- **Determining land needed for aeronautical purposes.**
- **Evaluation of AIP and PFC projects.**

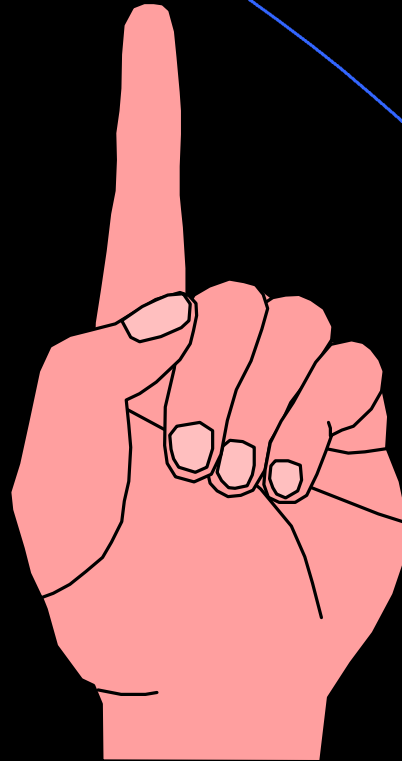
Why Do We Review and Approve ALPs?



Order 1000.1A, Policy Statement of FAA

**“It is the statutory responsibility,
and primary mission, of the
Federal Aviation Administration
to promote safety and to provide
for the safe use of airspace.”**

SAFETY
is
No. 1 !



FAA Airports' Mission

“To provide leadership in planning and developing a safe and efficient national airport system to satisfy the needs of aviation interests of the United States...”

AIP Funding

AIP Handbook, paragraph 300.c.
states:

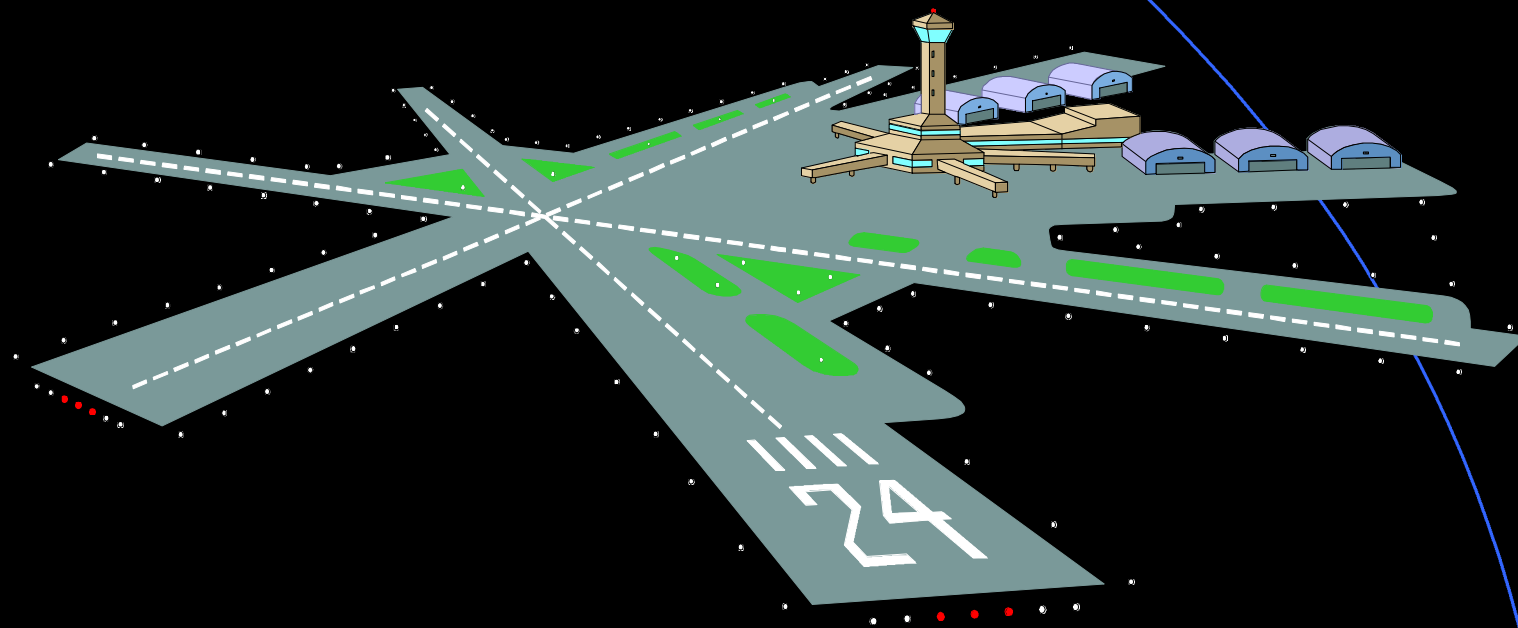
“A current Airport Layout Plan (ALP) which has FAA approval from the standpoint of safety, utility, and efficiency of the airport shall be required before a development project is approved.”

PFC Funding

FAR Part 158, Section 158.25 states:

“An application submitted for authority to use PFC revenue must include a signed certification that - “for projects required to be shown on an ALP, the ALP depicting the project has been approved by the FAA...”

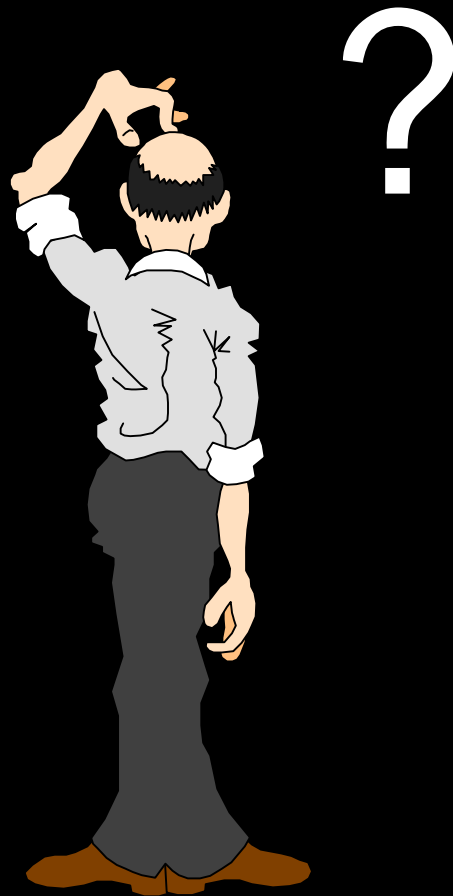
What is our role in ALP review and approval?



Role of the FAA/BGS Airport Planner:

- Provide Leadership and Guidance
- Encourage Realistic Planning
- Be Proactive
- Share Innovative Solutions
- Educate Airport Owners
- Represent all of FAA

What do we review?



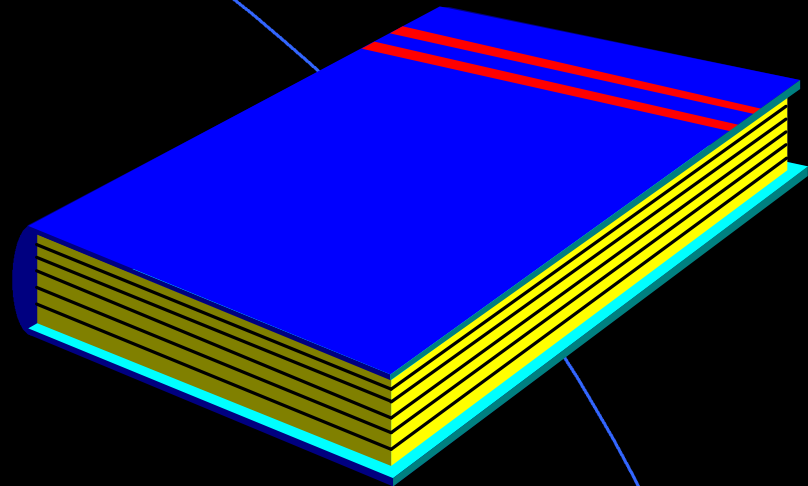
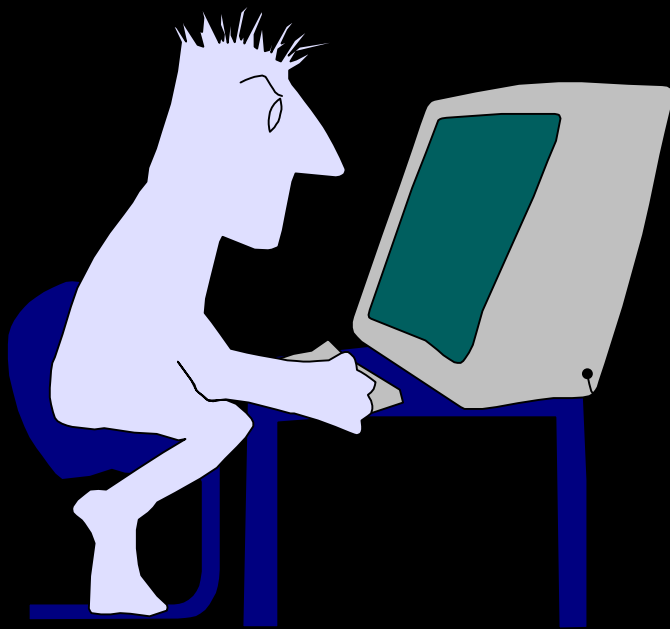
Focus of ALP Review



SAFETY and
efficiency

Airport Design Standards

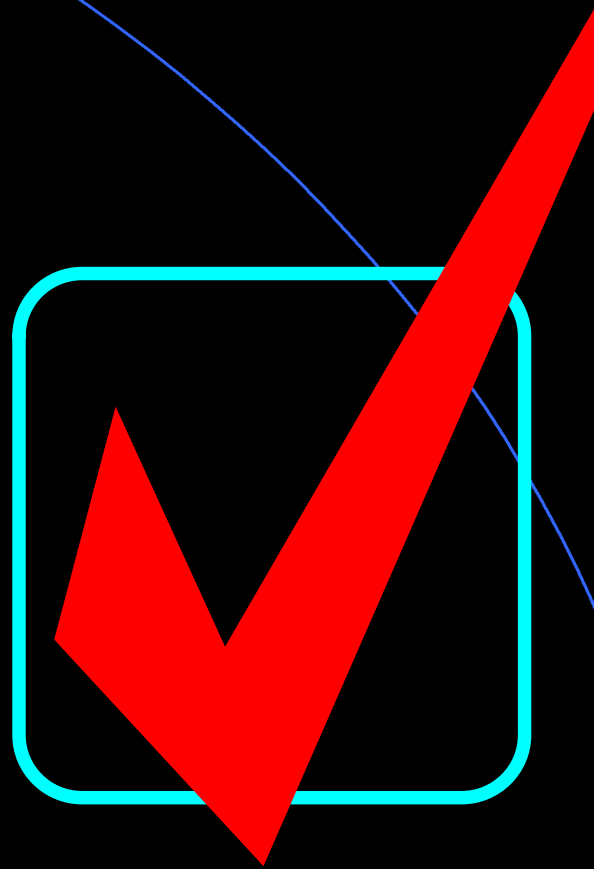
**AC 150/5300-13,
AIRPORT DESIGN**



**Airport Design for
Microcomputers
Version 4.2**

ALP Review Checklist

- Use AC 5300-13, Appendix 7
- Use judgment!
- Airport owner or consultant should be encouraged to complete checklist.



Important!!!

**DO NOT ACCEPT
CERTIFICATION
of ALPs!!!**



**AC 150/5300-13, par. 5a,
states in part that:**

“The FAA approved ALP, to the extent practicable, should conform to the FAA airport design standards existing at the time of its approval.”

Review should include:

- **ALP or Master Plan Report**
- **Runway Length**
- **Dimensional Criteria**
- **Line of Sight and Gradients**
- **Object Clearing Standards**
- **Obstructions**
- **Threshold Siting**

Modifications of Standards

AC 5300-13, par. 5 says in part:

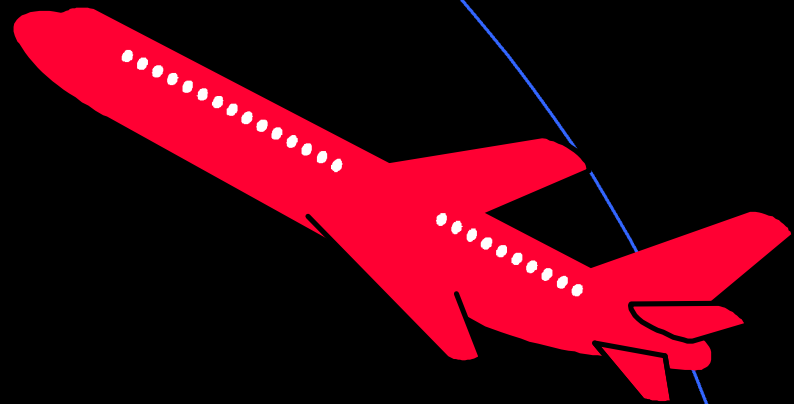
“Due to unique site, environmental, or other constraints, the FAA may approve an ALP not fully complying with design standards. Such approval requires an FAA study and finding that the proposed modification is safe [provides an acceptable level of safety] for the specific site and conditions.”

Modifications of Airport Design Standards

ALPs should not be approved unless existing and proposed development meets current airport design standards, or modifications of design standards have been approved that provide an acceptable level of safety.

Modification of Standards for Existing Development

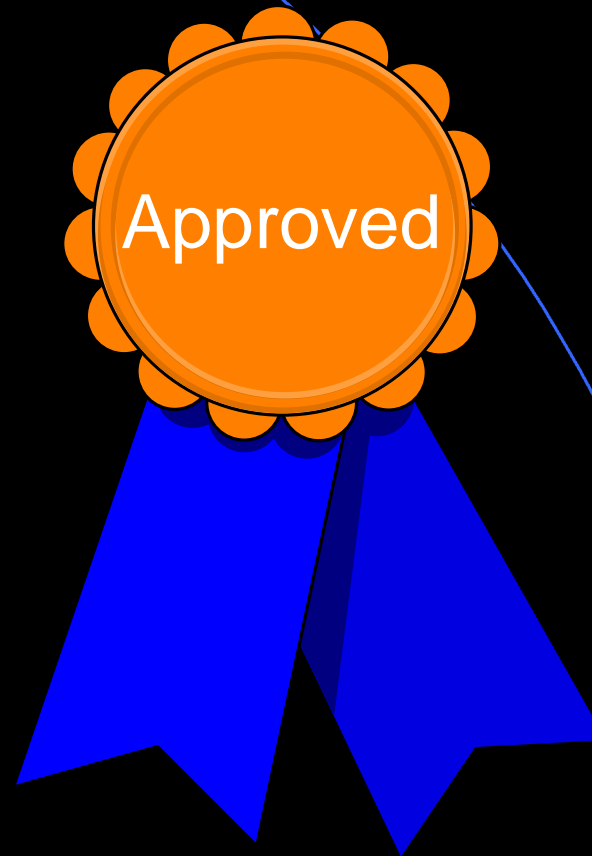
May require
operating
restrictions or
special
operating
procedures.



Approval of Modifications of Design Standards

IMPORTANT!!!

A modification may only be approved if, after coordination, ADO/RO determines it provides an acceptable level of safety.

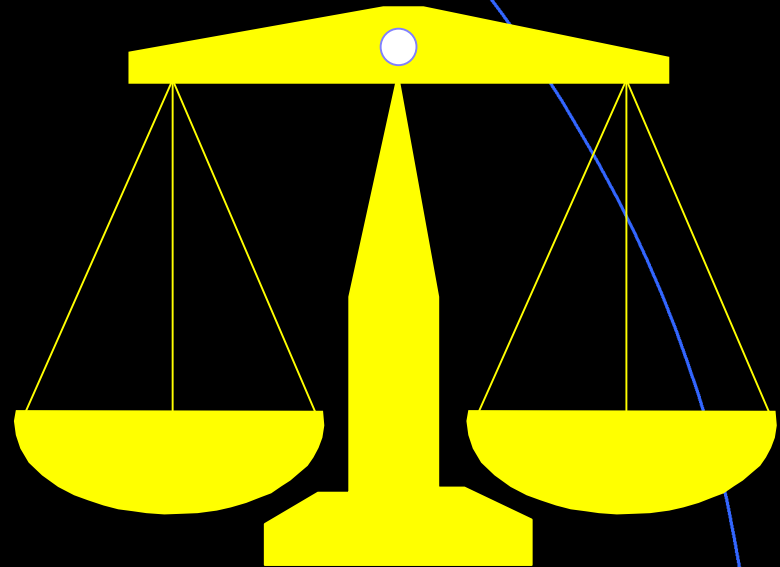


Modification of Standards Requirements

- **ALP: Table listing all approved and proposed modifications.**
- **Narrative Report or Master Plan: Discussion of the rationale for the proposed modifications.**

Declared Distances:

- Runway lengths declared available for an airplane's performance distances.
- May reduce allowable aircraft operating weights.



Use of Declared Distances

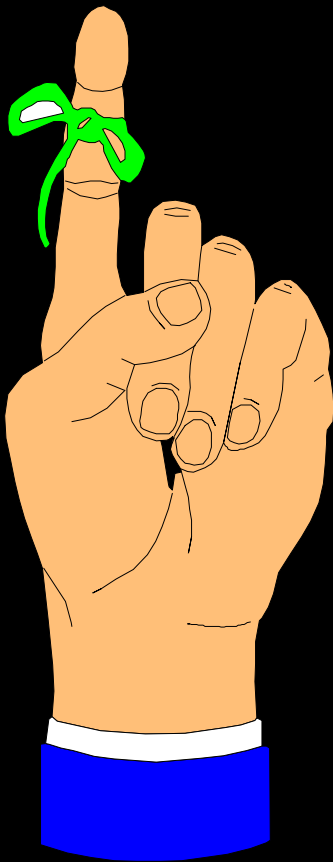
AC 150/5300-13, Appendix 14 states:

“The use of declared distances for airport design shall be limited to cases of existing constrained airports where it is impracticable to provide the RSA, ROFA, or RPZ in accordance with design standards...”

Guidelines for Use of Declared Distances

- **Shall not be used for new airports.**
- **Should only be used if more traditional methods of meeting standards are not practicable.**
- **May not be appropriate at some GA airports.**

REMEMBER !!!



**Declared distance
information is for
pilots.**

**It must get to NFDC
for publication in
the AFD!**

Review of Runway Safety Areas

- ALP should show actual and planned RSA dimensions.
- RSAs should meet design stds.
- Mod of stds should be proposed if meeting stds is not practicable.

Review of Runway Safety Areas Continued

FAR Part 139 requires airport owners to provide, to the extent practicable, a standard safety area on runways constructed, reconstructed, or significantly expanded on or after Jan 1, 1988.

“Significant Expansion”:

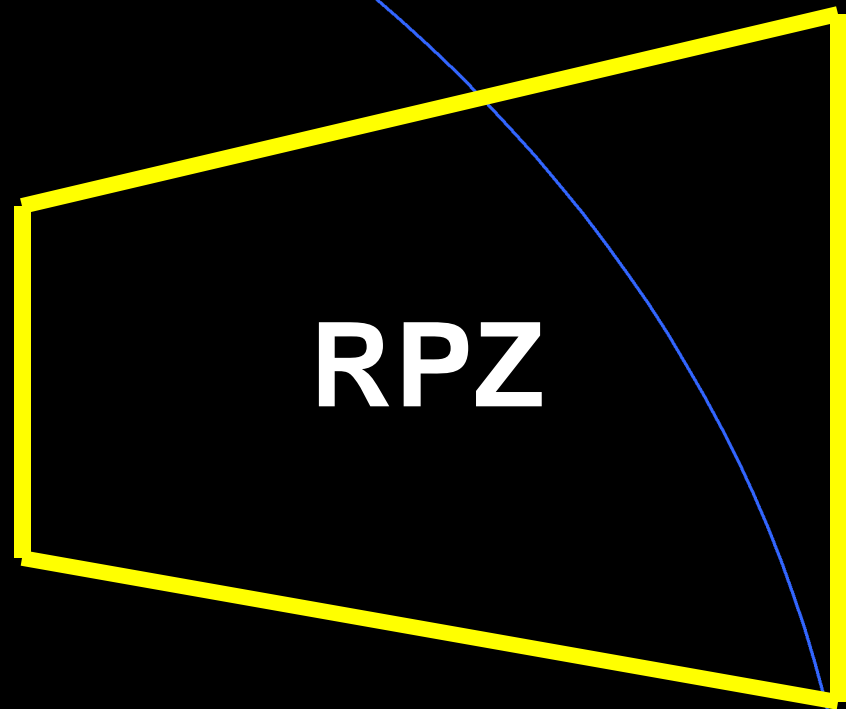
- **Extension of 500 feet or more**
- **Pavement strengthening**
- **Overlay with 15-20 year life**
- **Establish clearway or stopway**
- **Instrument approach with minimums below 3/4 statute mile**

A Runway Has Only One Safety Area !!!

RSA

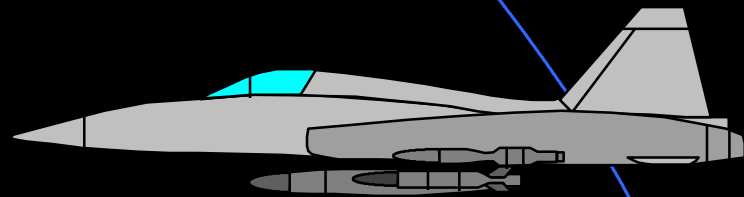
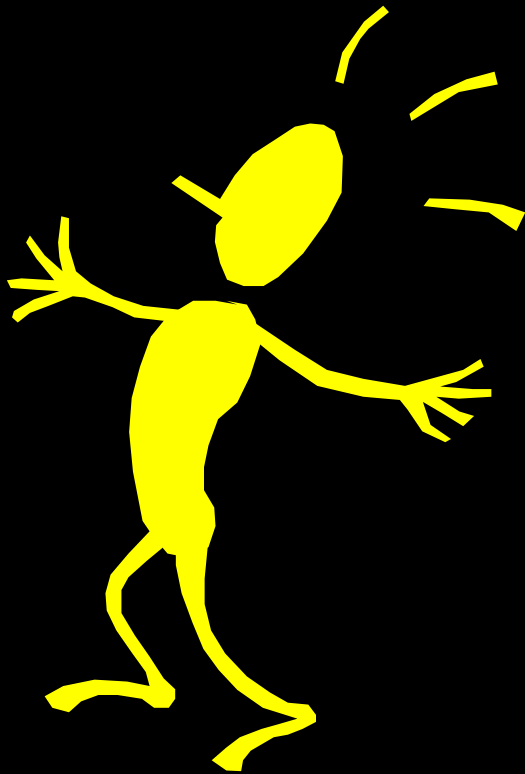


Runway Protection Zone



Primary Purpose of RPZ:

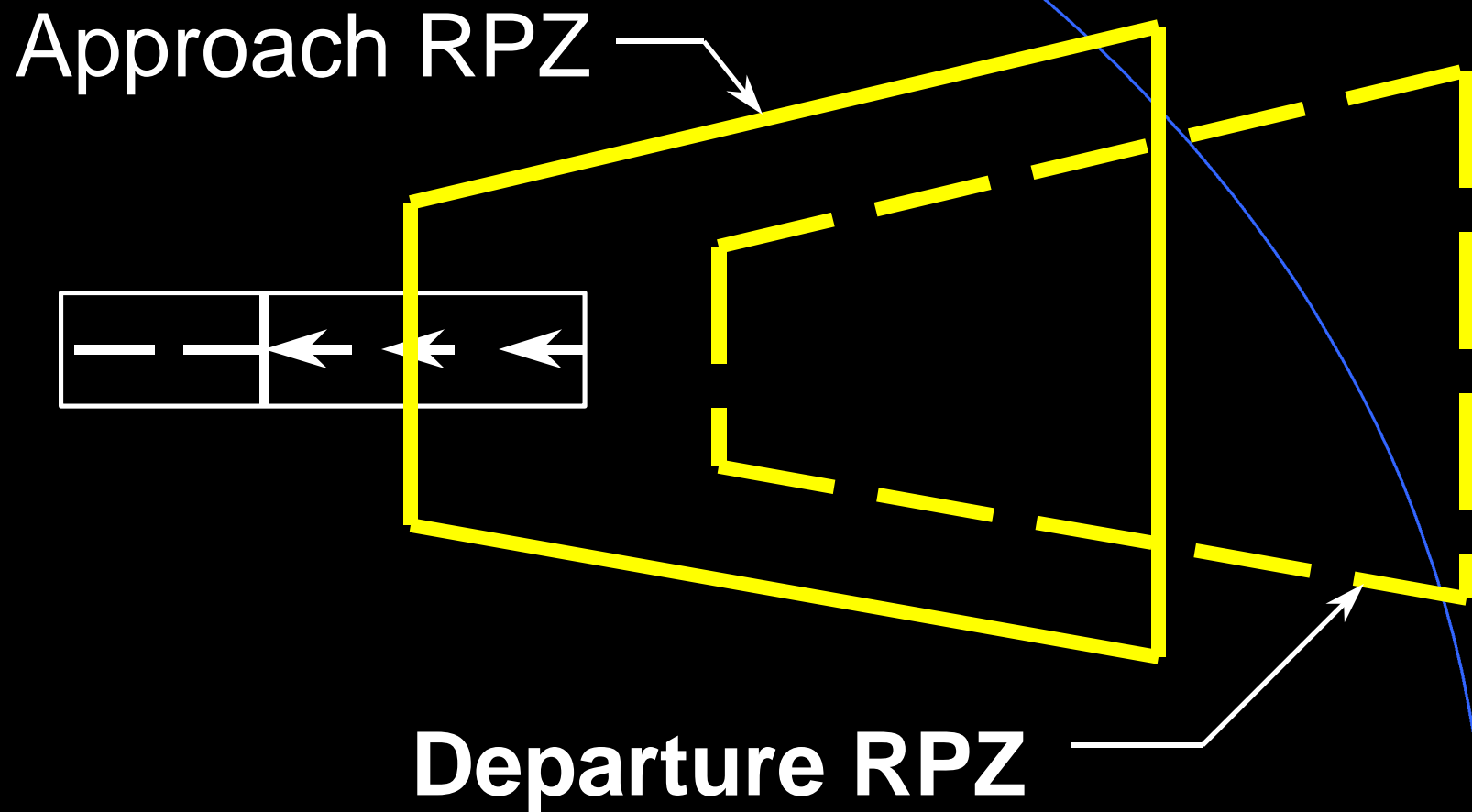
Protection of People and Property



RPZ Dimensional Standards

- Begins 200 feet beyond runway end useable for takeoff or landing.
- Separate approach and departure RPZs required with displaced threshold.

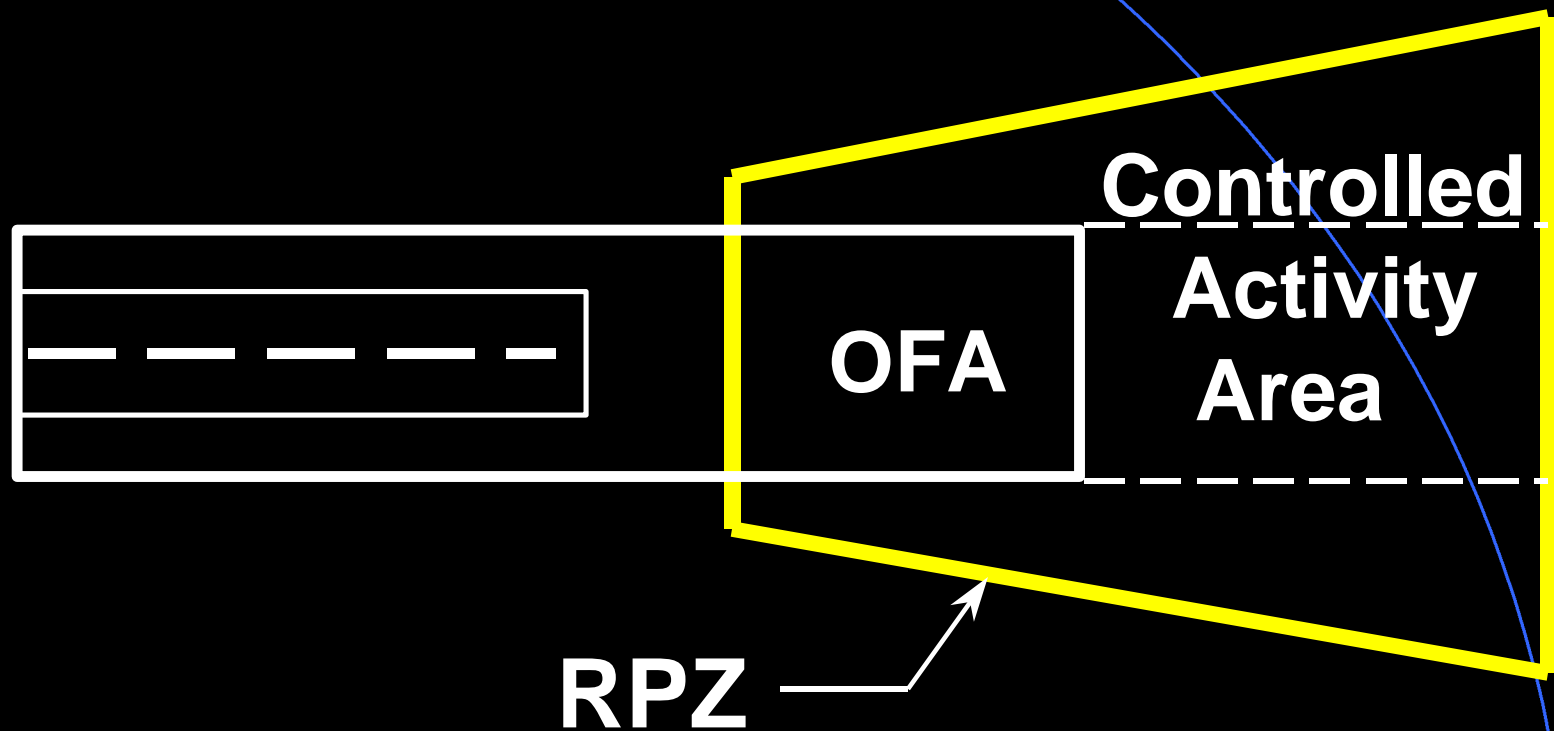
Runway Protection Zones with Displaced Threshold



RPZ Dimensional Standards Continued

- **Departure RPZ Dimensions:
AC 5300-13, Appendix 14**
- **Approach RPZ Dimensions:
AC 5300-13, Table 2.4**
- **RPZ will not always coincide
with inner portion of Part 77
approach surface.**

Runway Protection Zone Components



RPZ Clearing Standards

- **General:**

- Desirable to clear all above ground obj.
- As a minimum, clear all incompatible obj.

- **OFA:**

- Clear all obj. above RSA edge elevation.
- Exception: obj. required for air navigation or ground maneuvering.
- Taxi and hold aircraft in OFA is okay.
- Parked airplanes and agriculture not OK.

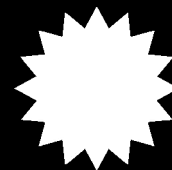
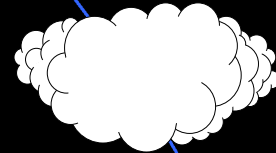
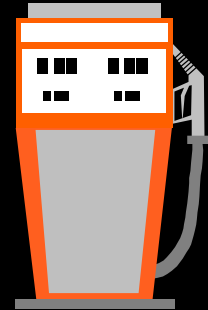
More RPZ Clearing Standards

- **CAA:**

- Desirable to clear all objects.
- Some uses permitted as long as they are outside the extended OFA:
 - golf courses
 - agricultural operations
 - parking facilities

Prohibited Uses in RPZ

- Fuel handling and storage facil.
- Smoke and dust generation
- Misleading lights and glare
- Wildlife attractants



Other Prohibited Uses

- **Residences**
- **Places of Public Assembly**
 - **Churches**
 - **Schools**
 - **Hospitals**
 - **Office buildings**
 - **Shopping centers**

RPZ Land Interest

- **Preferred: acquisition of entire RPZ**
 - clearing stds. are requirements
- **Minimum: acquire the OFA**
 - avigation easements over remainder
 - clearing stds. are recommendations

Review of Obstructions

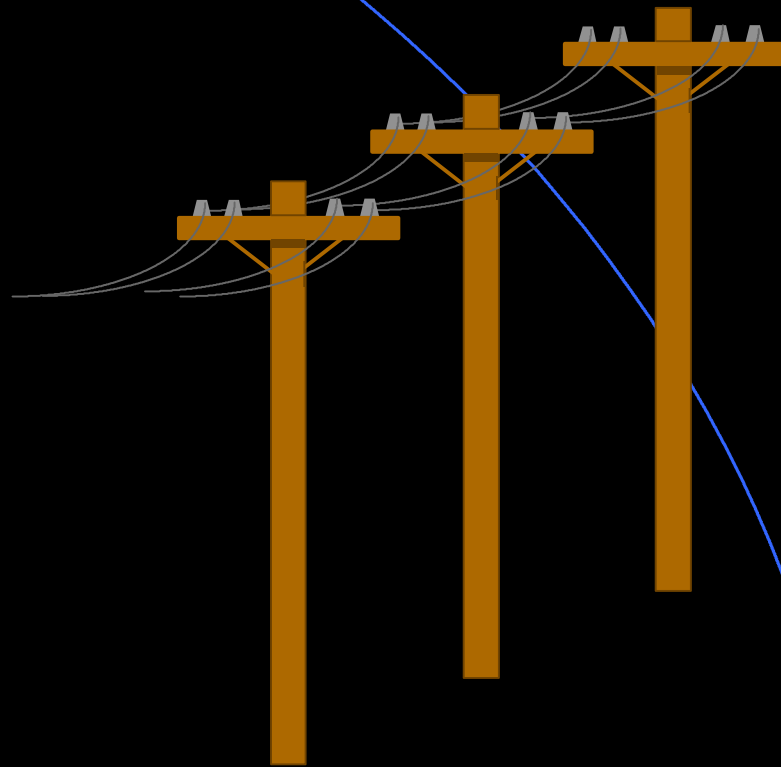
- **Focus on identification and Disposition**
- **Obstruction information available from:**
 - NOAA Obstruction Charts (OC Charts)
 - USGS Quadrangle Maps
 - FAA Form 5010's
 - OE Cases
 - Internet: www.ngs.noaa.gov/AERO/aero.html

Review of Obstructions

REMEMBER!!!

**FAR Part 77
IS NOT a design
standard!!!**

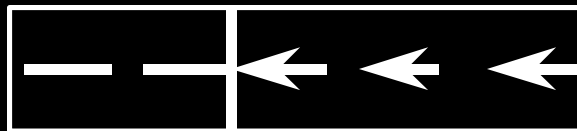
**It only identifies
obstructions!**



Review of Obstructions

- **Obstructions must be studied to determine if they are hazards.**
 - Obstructions not identified as hazards on the ALP are presumed not to be hazards.
- **Obstruction tables on the ALP drawings should indicate the planned disposition of all obstructions.**

Approach Surface with Displaced Threshold



200' ———>

**Part 77
Approach
Surface**

Runway Threshold Siting

- Use threshold siting surfaces in Appendix 2 of AC 5300-13, not Part 77
- Threshold - beginning of pavement available for landing.
 - Displaced threshold: threshold not at end of runway.
- Change 5 to AC 5300-13 eliminated “Relocated Threshold”.

Magnetic Variation and Runway Numbering

- **Verify ALP shows most current magnetic variation.**
 - AVN-160
- **Verify runway numbers are correct for the current magnetic variation.**
 - FAA Order 8260.25
 - AC 150/5340-1

Runway End Coordinates and Elevations

**FAA Order 5010.4, Airport Safety Data
Program, states in part:**

**“The National Ocean Service (NOS) is
considered the final authority for the
latitude, longitude, and elevation of
an airport.”**

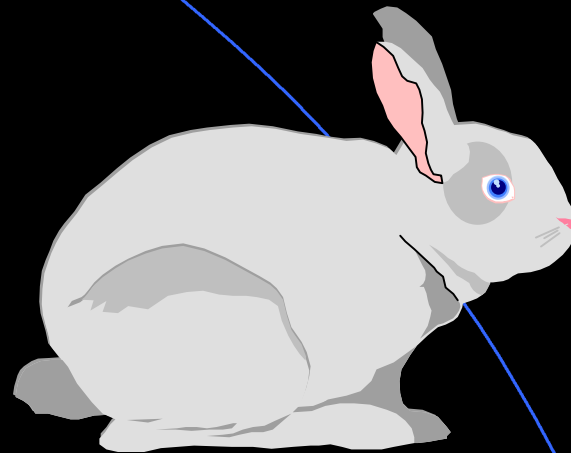
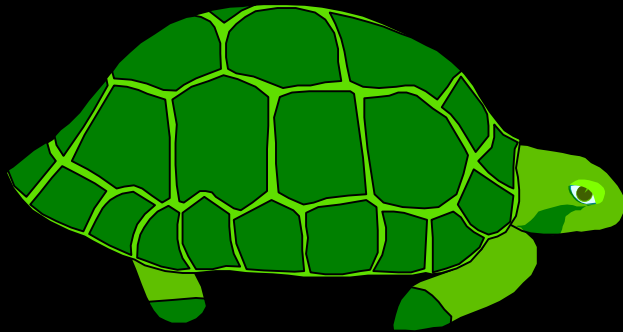
Runway End Coordinates and Elevations

- **Aircraft Management Information System (AMIS)**
- **Always use AMIS coordinates unless proven incorrect.**
- **If AMIS is incorrect, submit factual data to NFDC for update.**

Efficiency of the Airport

- Adequate facilities planned for forecast demand?
- Runway Orientation
- Runway Layout and Spacing
- Taxiway System

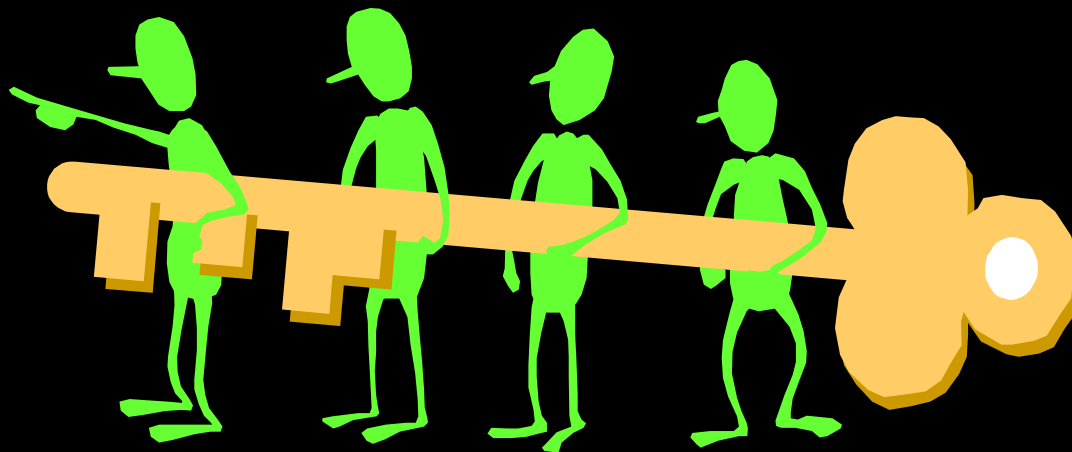
**Which of these reminds you of the
ALP Coordination process?**



**How we can improve the ALP coordination
process:**

ALP Coordination:

TEAMWORK!

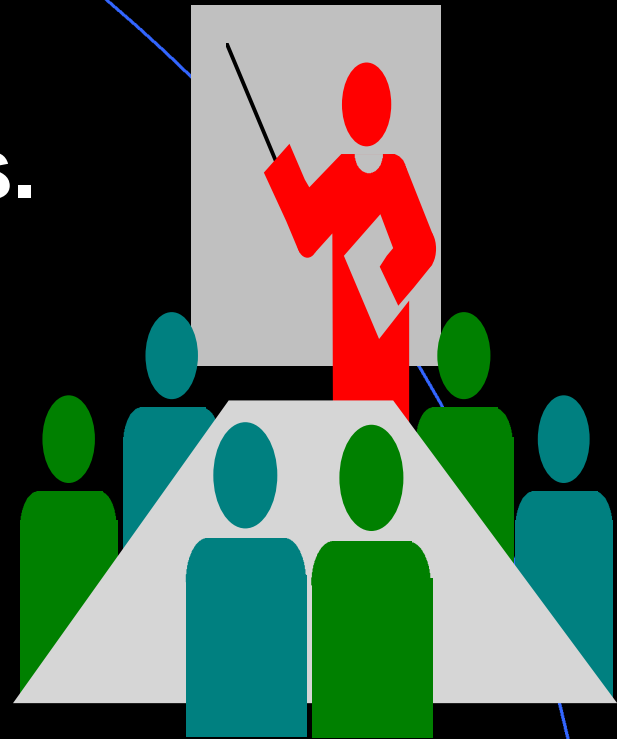


Improve Contents of ALP Coordination Package:

- **Include ADO's review comments.**
- **Identify major changes.**
- **Identify errors in application of design standards.**
- **Identify modifications of standards.**
- **Provide clear and specific instruc.**
- **Include Certif. of clear approaches.**

Regional Coordination Meeting

- Suggested for new ALPs or major updates.
- Forum for discussing problems, solutions, requirements.



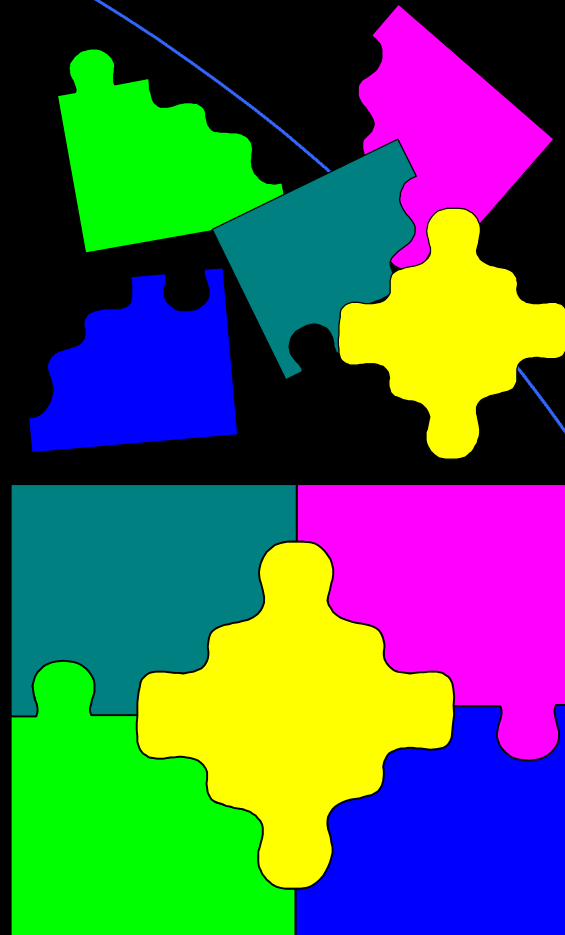
Resolution of Coordination Comments

- **Items within Airports' Authority:**
 - consider other divisions comments.
 - inform other divisions why any of their comments were not accepted.
- **Items within Other Divisions' Authority:**
 - all comments must be resolved.

Keep in Mind We're...

**Separate
Divisions**

One FAA!



What Does Our Approval of the ALP Mean?



FAA's approval means that we found the existing and proposed airport layout **safe** for use by the design aircraft.

What Does Our Approval of the ALP Not Mean?

**Our approval does not represent
a commitment to provide ALP or
PFC funding to implement any
development or air navigation
facilities shown on the plan.**

Unconditional vs. Conditional ALP Approvals

Unconditional: environmental processing is complete.

Conditional: environmental processing has not been completed.

Unconditional vs. Conditional ALP Approvals

Unconditional: “Approved”

Conditional: “Conditionally Approved”

- Approval Letter must contain the following condition:

Conditional ALP Approval - Required Condition

“The approval indicated by my signature is given subject to the condition that the proposed airport development identified by item herein as requiring environmental processing shall not be undertaken without prior written environmental approval by the FAA.”

Summary

- **ALP is a key communication and agreement document.**
- **Primary Mission: Provide leadership in planning and developing a safe and efficient national airport system.**
- **Primary Role: Provide Leadership**
- **Focus of ALP Review: SAFETY and efficiency.**

Summary Continued

- **ALP review is a team effort!**
- **We should clearly explain to airport owners what our ALP approval does and does not mean.**
- **Keeping in mind our mission and role is the key to better ALP reviews.**